

REMARKS

By this amendment, Applicants have amended claims 54, 58, 61, 65, and 67-69 to more distinctly point out the claimed invention. An appendix highlighting the changes to the claims is attached hereto.

Claims 45-69 are pending in the application. In the last Office Action dated March 13, 2001, the Examiner rejected claims 54-69 under 35 U.S.C. § 103(a) as being unpatentable over *Bezviner et al.* (U.S. Patent No. 5,613,148) in view of *Edwards et al.* (U.S. Patent No. 5,901,315).

Applicants respectfully traverse the rejection to claims 54-69 at least because *Edwards et al.* does not activate a requested object of the group in the virtual machine, such that at least one other object of the group remains inactive, as recited in claim 54, for example. The cited references do not teach the activation of one object of the group "such that at least one other object of the group remains active."

In distributed object-oriented programming systems, such as the Java programming language, activation of objects occurs at runtime. Active objects are loaded into memory and given a thread of control. The call to the object creates a separate thread of control used by that object. Inactive objects do not have a thread of control.

An inactive object, for example, only occupies memory space and takes no resources except memory space. An active object may receive memory space, a thread of control, time from a scheduler if in a multi-tasking operating system, and access to other resources in the system, for example.

The Examiner states that "a typical definition of inactive is a state which is not affected by the current command." (Office Action, p. 3-4). However, the Examiner also contends that portions of code being debugged are activated, while portions not being debugged are inactive. Even with the Examiner's interpretation of activation, as set forth in the Office Action dated March 13, 2001, the running of the target application would activate the objects of the application, not the debugging of the running target application. (Col. 2, ll. 5-7, "According to the method, the Java virtual machine is first launched . . . The application is then run under the Java virtual machine"; col. 5, ll.11-12, "the JVM that runs the Java application under debug"; col. 5. l. 20) As such, "portions of code not being debugged" (Office Action, p. 3) are already running in the target application and thus not inactive, since the debugger in *Edwards et al.* is debugging the target application which is already running. *Edwards et al.* does not disclose the details of the running of the application and details of resulting activation of objects, and thus does not teach or suggest activation or other recitations of the pending claims. Even by the Examiner's interpretation, portions of code in the target application that are not being debugged but are running are not inactive, and the activation would not hinge on the debugging.

Consequently, there is no "inherent step" in *Edwards et al.* (Office Action, p. 3) of "determining whether there is a virtual machine associated with the group of objects when it has been determined that the requested object is inactive," as recited for example in claim 54. Although not actually disclosed in specification of *Edwards et al.*, the Examiner states that "this is inherent to *Edwards et al.* because (a) the group of objects include active objects (portions of code being debugged which requires

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execution) and inactive objects (portions of code not being debugged) . . ." (Office Action, p. 3). Since, even by the Examiner's interpretation of activation, the portions of code not being debugged are not inactive (because they are already running), *Edwards et al.* does not teach or suggest the recitations included in pending claims 54-69.

Furthermore, Applicants respectfully traverse the rejections of claims 54-69, at least because *Edwards et al.* does not teach or suggest an independent virtual machine. The virtual machine in *Edwards et al.* is a slave machine which is controlled by the debugger (col. 5, 44-46), and thus *Edwards et al.* does not disclose an independent virtual machine, as recited in the pending claims. As a result, claims 54-69 are patentable over the cited references at least for these reasons.

Applicants respectfully request that this Amendment under 37 C.F.R. § 1.116 be entered by the Examiner, placing claims 54-69 in condition for allowance. Applicants submit that the proposed amendments of claims 54, 58, 61, 65, and 67-69 do not raise new issues or necessitate the undertaking of any additional search of the art by the Examiner, since all of the elements and their relationships claimed were either earlier claimed or inherent in the claims as examined. Therefore, this Amendment should allow for immediate action by the Examiner.

Furthermore, Applicants respectfully point out that the final action by the Examiner presented some new arguments as to the application of the art against Applicants' invention. It is respectfully submitted that the entering of the Amendment would allow the Applicants to reply to the final rejections and place the application in condition for allowance.

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Finally, Applicants submit that the entry of the amendment would place the application in better form for appeal, should the Examiner dispute the patentability of the pending claims.

In view of the foregoing remarks, Applicants submit that this claimed invention, as amended, is neither anticipated nor rendered obvious in view of the prior art references cited against this application. Applicants therefore request the entry of this Amendment, the Examiner's reconsideration and reexamination of the application, and the timely allowance of the pending claims.

Please grant any extensions of time required to enter this response and charge any additional required fees to our deposit account 06-0916.

Respectfully submitted,

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